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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
RAMDHANIE, BOBBY	
ART UNIT	PAPER NUMBER
1797	
MAIL DATE	DELIVERY MODE
07/31/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/849,293	LACOURSE ET AL.	
	Examiner	Art Unit	
	BOBBY RAMDHANIE	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) *15-22* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 May 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/17/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, Claims 1-14 in the reply filed on 04/21/2008 is acknowledged. Claims 15-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Singleton et al (US5462660) in view of Mattusch et al or Dasenbrock et al (1998).

5. Applicants' claims are toward an apparatus.

6. Regarding Claims 1-9, Singleton et al discloses the apparatus for sampling one or more analytes of a liquid sample, comprising: A).One or more pre-concentration chromatographic columns that are capable of retaining said one or more analytes (See

Figure 1 Item 16); B). A solvent delivery system in fluid communication with said one or more pre-concentration chromatographic columns, wherein said solvent delivery system is capable of delivering a solvent that is capable of eluting said one or more analytes from said one or more pre-concentration chromatographic columns (See Figure 1 Items 14 & 26); C). One or more analytical chromatographic columns in fluid communication with said one or more pre-concentration chromatographic columns, wherein said one or more analytical columns is capable of separating said one or more analytes (See Figure 1 Item 18); and D). A variable wavelength detector in fluid communication with said one or more analytical columns (See Figure 1 Item 20 & Column 4 lines 1-5). Singleton et al does not disclose E). An electrochemical detector in fluid communication with said variable wavelength detector. Singleton et al does however disclose that the apparatus is used to determine a variety of food substances in fermentation processes such alcoholic beverages and wine. Singleton et al also discloses that the detector is not limited to a UV detector.

7. Mattusch et al discloses an HPLC which is used to determine food substances in alcoholic beverages which uses an inline (serial) UV-electrochemical dual detection system (See Page 427; Section 3 Electrochemical Detection). Dasenbrock et al also discloses the use of an inline UV-detector with an electrochemical detector for use in identifying substances in beverages for human consumption (See title & Experimental Section Chromatography System). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singleton et al with the dual inline UV-electrochemical detection system of either Mattusch et al of Dasenbrock et al.

According to Mattusch et al, the electrochemical detection offers a higher sensitivity of detection (See Abstract). According to Dasenbrock et al, the electrochemical detection has been shown to effective detection of sulfur containing compounds following HPLC (See Page 2415; Right Column 1st Paragraph); which is consistent with detection explosives in water or in fermentation of beverages such as wine (See Singleton et al; Column 3 lines 47-51).

8. Additional Disclosures Included: Claim 2: Wherein said variable wavelength detector and said electrochemical detector are connected in line (See Mattusch et al; Page 427 Section 3 Electrochemical Detection or See Dasenbrock et al Page 2416; Experimental Section; Chromatography System); Claim 3: Wherein said one or more analytes is selected from the group consisting of nitroso compounds, organic nitro compounds, organothiophosphates, PAHs and drug metabolites (See Singleton et al Column 3 lines 45-56; See Dasenbrock et al- See Title); Claim 4: Wherein said one or more analytical chromatographic columns is a high-performance liquid chromatography column (See Singleton et al Figure 1 & Column 3 lines 35-43; Mattusch et al See Summary; See Dasenbrock et al; See Title); and Claim 5: The apparatus of claim 1, further comprising a sample loop in fluid communication with said one or more pre-concentration chromatographic columns (See Singleton et al Figure 1 Item12).

9. For Claim 6, the combination of Singleton et al with either Mattusch et al or Dasenbrock et al discloses the apparatus of claim 5, except wherein said sample loop is a 2 ml sample loop. Singleton et al does however disclose that the sample loop is 1 mL (See Example 4). It would have been obvious to one having ordinary skill in the

art at the time the invention was made to replace the 1 mL sample loop with a 2 mL sample loop, since it has been held that the provision of adjustability, where needed, involves routine skill in the art. In re Stevens, *101 USPQ 284 (CCPA* 1954). Alternatively it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the 1 mL sample loop with 2 mL sample loop to concentrate a trace amount of explosives in an aqueous sample to obtain a better signal from the detector.

10. For Claim 7, the combination of Singleton et al with either Mattusch et al or Dasenbrock et al disclose the apparatus of claim 1, except wherein said one or more pre-concentration chromatographic columns are C18, 5μm particle size columns. Singleton et al does however disclose that the pre-concentration chromatographic column is C18. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a C18 column with a suitable particle size, such as 5 μm, because according to Singleton et al, the column packing material is selected based on the components which will be analyzed (See Column 3 lines 45-47).

11. For Claim 8, the combination of Singleton et al with either Mattusch et al or Dasenbrock et al disclose the apparatus of claim 1, except wherein said one or more analytical chromatographic columns are C18 reversed phase, 5μm particle size columns. Singleton et al does however disclose that the C18 rp column is a 3 μm particle size column (See Example 4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the 3 μm particle size column with a 5 μm particle size column, since it has been held

that the provision of adjustability, where needed, involves routine skill in the art . In re Stevens, *101 USPQ 284 (CCPA* 1954).

12. For Claim 9, the combination of Singleton et al with either Mattusch et al or Dasenbrock et al disclose the apparatus of claim 1, except wherein said electrochemical detector is a photo-assisted electrochemical detector. Both Mattusch et al and Dasenbrock et al disclose the use of electrochemical detectors in post-column analysis. Dasenbrock et al further discloses the need for post-column derivatization for adequate sensitivity to accomplish analysis (See Dasenbrock et al, Page 2415, Right Column). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a photo-assisted electrochemical detector as a matter of design choice depending on what substance was of interest in the analysis as well as to obtain better sensitivity of the detector for compound(s) to be analyzed.

13. Alternatively, Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Singleton et al (US5462660) in view of Dasenbrock et al (1998) and in further view of Lui et al (1998).

14. Applicants' claims are toward an apparatus.

15. Regarding Claim 9, the combination of Singleton et al and Dasenbrock et al disclose the apparatus of Claim 1, except wherein the electrochemical detector is photo-assisted. Lui et al discloses the use of a photo-assisted electrochemical detector in conjunction with a liquid chromatograph (See Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Singleton et al and Dasenbrock et al with the photo-assisted

electrochemical detector of Lui et al because Singleton et al and Dasenbrock et al and Lui et al are all interested in the detection of nitro compounds (See Lui et al; Page 69, Right column).

16. Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Singleton et al (US5462660) in view of Dasenbrock et al (1998) and in further view of Lui et al (1998).

17. Applicants' claims are toward an apparatus.

18. Regarding Claims 10 & 11, the combination of Singleton et al with Dasenbrock et al disclose all of the claim limitations (See above rejections for Claim 1), except E). A photo-assisted electrochemical detector in fluid communication with said variable wavelength detector, wherein said variable wavelength detector and said photo-assisted electrochemical detector are connected in line. Lui et al discloses the use of a photo-assisted electrochemical detector in conjunction with a liquid chromatograph (See Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Singleton et al and Dasenbrock et al with the photo-assisted electrochemical detector of Lui et al because Singleton et al and Dasenbrock et al and Lui et al are all interested in the detection of nitro compounds (See Lui et al; Page 69, Right column).

19. Additional Disclosures Included: Claim 11: The apparatus of claim 10, further comprising a sample loop in fluid communication with said one or more pre-concentration chromatographic columns (See Singleton et al; Figure 1 Item 12).

20. For Claim 12, Singleton et al in combination with Dasenbrock et al & Lui et al discloses the apparatus of claim 11, except wherein said sample loop is a 2 mL sample loop. Singleton et al does however disclose that the sample loop is 1 mL (Se Example 4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the 1 mL sample loop with a 2 mL sample loop, since it has been held that the provision of adjustability, where needed, involves routine skill in the art. In re Stevens, *101 USPQ 284 (CCPA* 1954).

21. For Claim 13, Singleton et al in combination with Dasenbrock et al & Lui et al, disclose the apparatus of Claim 10, except wherein said one or more pre-concentration chromatographic columns are C 18, 5 μm particle size columns. Singleton et al does however disclose that the pre-concentration chromatographic column is C18. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a C18 column with a suitable particle size, such as 5 μm, because according to Singleton et al, the column packing material is selected based on the components which will be analyzed (See Column 3 lines 45-47).

22. For Claim 14, the combination of Singleton et al Dasenbrock et al & Lui et al, disclose the apparatus of claim 10, except wherein said one or more analytical chromatographic columns are C18 reversed phase, 5μm particle size columns. Singleton et al does however disclose that the C18 rp column is a 3 μm particle size column (See Example 4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the 3 μm particle size

column with a 5 μm particle size column, since it has been held that the provision of adjustability, where needed, involves routine skill in the art. In re Stevens, *101 USPQ 284 (CCPA* 1954).

Telephonic Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BOBBY RAMDHANIE whose telephone number is (571)270-3240. The examiner can normally be reached on Mon-Fri 8-5 (Alt Fri off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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1797

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